



*"Culture is like the sum of special knowledge that accumulates in any large united family and is the common property of all its members."*

- Aldous Huxley

In parts of Nepal, man-made canal systems are essential for crop irrigation. Farmer-owned and managed, these systems can be rudimentary, built with mud and stones and requiring constant upkeep.

In the Dang valley region, the U.S. Agency for International Development and the Nepal Department of Irrigation funded the construction of a modern system of concrete and steel to replace five farmer-owned systems. Canal management was now in the hands of a central authority using modern construction techniques versus local knowledge of soil conditions, mud run-off or community norms and practices.

Since its operation, water delivery has been inconsistent, and agricultural output is now less than it was under the previous and more rudimentary farmer-owned systems.

This example shows the result of issues management from a purely technical perspective without consideration for seemingly less tangible aspects; in this case, the critical role of the community's knowledge, norms and behaviors.

Addressing the convergence of animal and public health also requires recognizing multiple factors that may be difficult to quantify yet have significant impact upon the eventual success or failure of an initiative.

Listed below are a series of considerations when addressing health convergence.

## SOCIAL DILEMMAS

Individuals, organizations and governments may pursue activities that are logical and rational from their standpoint, yet for greater society, may lead to less than desirable outcomes. This can create tension and lead to "social dilemmas."

Social dilemmas can manifest at many different levels. In some countries, an insufficient investment in animal health infrastructure puts neighboring countries at greater risk of a disease outbreak. Despite this, policymakers may still see animal health as a low priority, rationalizing that the international community would step up to provide resources and assistance should a disease outbreak occur.

Some producers may oppose broader initiatives (such as vaccination programs) for a variety of reasons even though at a regional or national level, a successful campaign could elevate the sanitary status of the country and lead to increased commerce and income. Despite this, some producers may forego vaccination or skirt controls if the costs outweigh the

benefits. Ignoring social dilemmas in the pursuit of 'greater benefits for greater society' does not necessarily ensure success.

Such social dilemmas often reflect the shared beliefs of a culture, community or organization. A population's deep-rooted cultural practices can also be a basis for action that makes sense from a variety of perspectives yet could have harmful consequences.

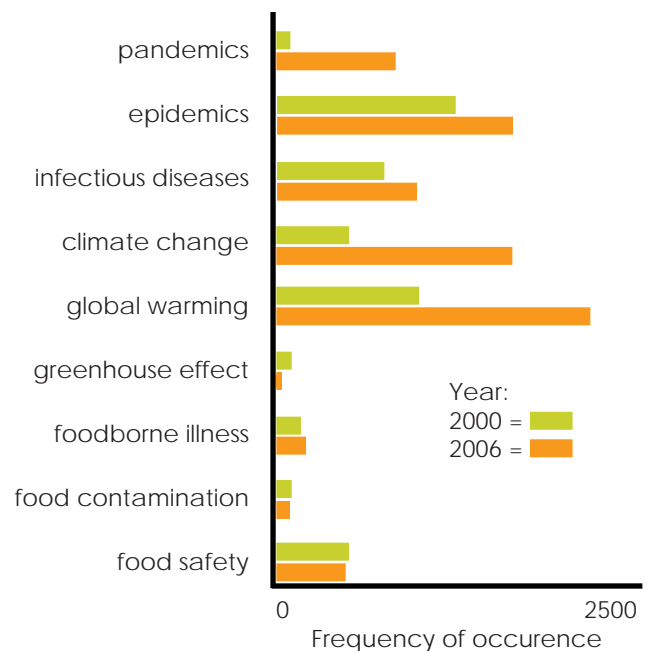
## COMMUNITY BELIEFS

Social dilemmas can stem from a population or community's core set of shared beliefs. These can have long-standing religious or social bases, or be rooted in business and production beliefs passed on for generations. These beliefs may be rational for that community, yet may conflict with scientific knowledge and lead to devastating results.

Some populations or communities believe it important to inspect live animals prior to purchase and consumption.

### SHIFTING ATTITUDES AND PRIORITIES

Frequency in the use of words in major international mass media print publications.



New technologies give greater access to information affecting our attitudes and priorities, increasing our ability to interpret and act upon societal signals.

- Lexis-Nexis search (2007), and Michigan State University Libraries

Live animal markets in many countries cater to this practice and may congregate many different species in close proximity -- an undesirable practice that can encourage disease transmission. Such was the case in China in 2002 resulting in the outbreak of severe acute respiratory syndrome (SARS) that quickly became a global public health issue.

## CULTURAL PRACTICES

Long-standing cultural practices can supersede technological advances laws or changing population demographics such as increased urbanization. Household pets, including exotic species, are increasingly common. Cats can be a reservoir for rabies or Gambian rats may introduce diseases such as monkey pox. In some cultures, backyard chickens are a meat source but may also be used for other purposes such as cock fighting. Backyard flocks may exist in relative proximity to intensive agricultural production operations. In some countries and societies, animals and people live in the same premise where the animals roam free. All can facilitate animal-to-animal and animal-to-human disease transfer.

Eradicating backyard flocks is seen as one possible measure to halt the spread of avian influenza H5N1. However, such actions may produce other undesirable outcomes. For example, in the late '70's and early 80's, all of the pigs on the island of Hispaniola (Dominican Republic and Haiti) were eradicated to control African swine fever. The disease was successfully eliminated, yet replacement pigs from North America adapted poorly. Notable impacts included a 50 percent drop in school enrollment, as the role of the pig in society was not fully understood.

## SHIFTING ATTITUDES AND PRIORITIES

The beliefs and practices of a culture or organization are influenced by information as reflected in shifting attitudes and priorities. The advent of the information age has brought about a world where change occurs more rapidly than ever before. There is more information in a weekly edition of the New York Times than the average 18th century citizen in the U.S. came across in a lifetime.

New technologies, changing demographics, globalization and access to unprecedented amounts of information all converge and can influence how we view the world and possible opportunities and solutions. This ultimately affects our attitudes and priorities, increasing the importance of our ability to interpret and act upon societal signals. Climate change is one example of an issue that has come to the forefront of public consciousness over a relatively short period of time (See figure on front page).

## RECOGNITION OF COMMON GROUND

Establishing common ground is one avenue to channel changing priorities and attitudes that reaches across different cultural practices, attitudes and beliefs.

A common ground vantage point can accommodate non-quantifiable factors and encourages broad support across seemingly diverse individuals or communities. Pulitzer Prize winner and Harvard scientist E.O. Wilson embodies this approach. His concern that current resource use and practices threaten the future sustainability of the planet has brought him to the forefront of environmental activism. Seeking to combine efforts toward greater stewardship, Wilson is enjoining scientific and religious leaders to meet "on the near side of the metaphysical" and to stimulate change.

## SUSTAINED VISION AND COMMITMENT

Building common ground and pursuing actions that address societal problems and dilemmas requires sustained vision and commitment over time. In Costa Rica, the National Biodiversity Institute (InBio) is a source of national pride. Early on, InBio, a non-profit NGO, received no government funding and struggled financially. One day it received a \$1 million check from a pharmaceutical company. Honoring its founding vision, InBio's board wrote on the back of the check "Some things are more important than money" and sent it back. As it turned out, InBio's sustained commitment to its long term vision would lead to a stable path for future growth and national and international recognition.

## SOCIAL CAPITAL

The aforementioned factors recognize that increased interdependence is a reality as countries and communities become less self-sufficient in meeting all essential needs. Effective interdependence assumes a level of trust and confidence, or "social capital." When a farmer sends to market sick birds enabling a disease of local origin to morph into a global health concern, social capital is eroded. The same occurs when a business person intentionally adulterates feed ingredients intended for export, leading to adverse health consequences in importing countries who then question the integrity of the entire food or ingredient supply chain.

## SUMMARY

Civil society will play an increasingly larger role in shaping the debate. This will be manifest in ways that include reexamining beliefs and practices, shifting priorities and sustained commitment. These seemingly less tangible factors will grow in importance just as the interactions leading to the convergence of animal and public health will also increase in complexity.